IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method usable with a subterranean well, comprising: obtaining pressure measurements along a wellbore during flowing of the well without intervening in the well; and

using a model to determine from the pressure measurements a distribution of a permeability profile characteristic in the vicinity of the well.

- 2. (Canceled)
- 3. (Original) The method of claim 1, wherein the using comprises: providing an estimation of the distribution to the model; and refining the estimation using the pressure measurements.
- 4. (Original) The method of claim 3, wherein the refining comprises performing an inversion of a connection factor that interrelates the distribution to the pressure measurements.
 - 5. (Original) The method of claim 1, further comprising: deploying a sensor into the well; and obtaining the pressure measurements from the sensor.
- 6. (Original) The method of claim 5, wherein the deploying comprises deploying an optical fiber into the well.
- 7. (Original) The method of claim 1, further comprising treating the well in response to the determined distribution of the characteristic.

- 8. (Previously presented) The method of claim 1, further comprising placing a subsequent well in response to the determination of a specific type of distribution of the characteristic.
- 9. (Original) The method of claim 1, wherein the obtaining comprises using sensors that are permanently mounted in the well.
 - 10. (Canceled)
 - 11. (Canceled)
 - 12. (Canceled)
 - 13. (Canceled)
 - 14. (Canceled)
 - 15. (Canceled)
 - 16. (Canceled)
 - 17. (Canceled)
 - 18. (Canceled)
 - 19. (Canceled)
 - 20. (Canceled)
 - 21. (Canceled)
 - 22. (Canceled)
 - 23. (Canceled)
 - 24. (Canceled)
 - 25. (Canceled)